

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Barbara Beerhalter	Chair
Cynthia A. Kitlinski	Commissioner
Norma McKanna	Commissioner
Robert J. O'Keefe	Commissioner
Darrel L. Peterson	Commissioner

In the Matter of the Implementation of an Energy Conservation Program for
Minnesota Power

ISSUE DATE: April 14, 1988

DOCKET NO. E-015/M-87-232

ORDER APPROVING MINNESOTA POWER'S CONSERVATION
IMPROVEMENT PROGRAM AND REQUIRING NEW PROJECTS AND
INFORMATIONAL FILINGS

PROCEDURAL HISTORY

On May 1, 1987, Minnesota Power, (MP or the Company) filed its Conservation Improvement Program (CIP) with the Minnesota Public Utilities Commission (Commission), pursuant to the provisions of Minn. Rules, part 7840.0500. Notice of filing was given to participants in MP's last general rate case and participants in MP's two previous CIP cases, pursuant to the provisions of Minn. Rules, part 7840.0800.

Between May 14, 1987 and August 21, 1987, comments on MP's filing and reply comments were received from the following participants: The Minnesota Department of Public Service (DPS), the City of Duluth, the Duluth Community Action Program (DCAP), MP, the Neighborhood Energy Service (NES), and the Duluth Energy Resource Center.

On June 12, 1987, the Commission issued its Order Regarding Filing Deficiencies and Requiring Additional Information which required MP to provide certain supplemental information.

On July 1, 1987, the Commission issued its Order granting MP a 15 day extension of time to file the supplemental information.

This Order also resolves the issues raised by participants concerning MP's January 23, 1987 filing with the Commission to terminate the Shared Savings project, and to implement the Little Falls Home Energy Check-up project and the Low Income Electric Space Heat Project. Comments on that filing were received from the Arrowhead Economic Opportunity Agency, the Duluth Community Action Program, and the DPS.

FINDINGS AND CONCLUSIONS

The Commission received no requests for a contested case hearing on MP's proposed CIP and will therefore resolve this case on the basis of the written record.

Proposed Projects

The first issue is whether the projects proposed by the Company and other participants should be approved as filed, modified, or rejected.

MP proposed eight projects for approval as its CIP program for 1987-1988 with a total budget of \$184,180. Four projects were proposed to be continued from last year: the Duluth Neighborhood Energy Service (NES) Project, the Weatherization Technical Assistance Project, the Electric Water Heater Replacement Project, and the Technology Transfer Project. MP proposed to offer four new projects: the Little Falls Home Energy Check-up Project, the Low Income Electric Space Heat Project, the Duluth Home Energy Evaluation Project, and the Fond du Lac Home Energy Check-up Project. MP proposed an annual budget for these projects of \$184,180.

The Duluth Community Action Program proposed that the Commission require MP to offer an Electric Energy Help Project.

MP described three potential projects which could be offered to commercial and industrial customers, but recommended that they not be implemented.

The Commission has considered the proposed projects on their individual merit and on how they fit together to make up a comprehensive energy conservation program. The Commission is not limited to approving projects with a total budget equal to the total budget proposed by MP. Rather, the Commission must insure that MP make a significant investment in and expenditures for energy conservation.

In so doing, the Commission will first discuss the projects proposed by MP and other participants and explain the basis for the Commission's acceptance or rejection of those projects. Next, the Commission will discuss why the ordered CIP expenditures constitute a significant level of investment for MP.

MP Proposed Projects

1. Duluth Neighborhood Service (NES Project)

Under this project MP would pay the NES to deliver MECS audits, neighborhood workshops, and related services in selected areas of Duluth. This project is primarily an educational effort. The NES is a community-based energy council which uses direct mail, neighborhood referrals, door-to-door outreach, public service announcements, brochures, and newspaper announcements to market its services.

The objectives for the 1987-88 CIP year are to complete 782 audits. The NES would target three neighborhoods in this CIP year. Two of the three neighborhoods have higher than average concentrations of renters and low income households. MP proposed a budget of \$63,120 for this project. This is an increase over the \$44,720 annual budget approved for NES by the Commission for MP's 1986-87 CIP.

The Commission will approve this project because this project was effective at encouraging conservation activities, particularly in the areas of infiltration control measures such as weather-stripping, caulking, and window improvements. Further, it has proven successful in motivating residents to install cost-effective energy improvements. Also, MP is required under federal law to provide MECS audits. This project appears to be an effective way of providing those audits.

The NES proposed that MP be required to increase its proposed budget by \$9,920 to fund a half-time staff position to perform outreach activities needed to help NES meet its quota. The Commission will not approve the NES request because the project should continue to be funded on a performance basis. That is, the NES is reimbursed by MP based on the number of quantifiable conservation activities performed instead of being given a lump sum payment for administrative or staff positions.

2. Weatherization Technical Assistance

This would be a continuation of an ongoing project. Under this project, MP lends one infrared scanner and five blower doors to community organizations. The organizations use the equipment to detect energy loss in customer homes.

MP proposed a budget of \$1,920 for this project. MP projects that 300 participants will benefit from this project.

The Duluth Community Action Program initially recommended that MP purchase two more infrared scanners for use by community organizations. It later revised its request to one additional scanner.

The Commission will approve this project as proposed by MP because it is an inexpensive project that provides conservation assistance to participating organizations that provide conservation services to low income customers. The Commission will not approve the purchase of an additional infrared scanner because the need for an additional scanner was not supported. The scanner had a usage rate of only 17% last year, indicating that an additional scanner is not justified.

3. Water Heater Replacement Project

Under this project, MP offers low and moderate income customers high efficiency water heaters at its cost. Also, zero interest financing is available for credit-worthy customers. Household eligibility is determined by community organizations. MP stated that the average annual savings per participant would be 600 kwh. The proposed budget for this program is \$2,190.

The DCAP recommended that the water heaters be provided free of charge and recommended a funding level of \$100,000.

The Commission will not approve this project at this time. The Commission is concerned about the fuel switching aspects of such a program. If customers were encouraged to switch from a natural gas water heater to an electric water heater, the results could be increased electric usage instead of decreased electric usage.

4. Technology Transfer Project

The purpose of this project is to educate Minnesota builders, remodelers, and energy auditors about low energy housing. MP, Northern States Power Company, and the DPS are jointly involved in this project which was approved by the Commission last year at a budget of approximately \$9,000. The proposed budget for this year is \$1,700 for the purpose of completing the project.

The Commission will approve this project because it is an innovative project targeted to a group that can implement energy efficiency in building construction. The budgeted amount of this project is low compared to the potential for long-term energy savings which could result.

5. Little Falls Home Energy Check-Up (HEC)

The purpose of this project is to implement a Community Energy Conservation project, which includes energy audits and the installation of weatherization kits. MP, Minnegasco, and the DPS worked with the Little Falls Energy Committee to develop this project. MP will pay the Little Falls Energy Committee \$65 for each home energy check-up completed. MP will also pay \$25 for each weatherization kit installed. MP will fund up to 100 HECs for a budget of \$9,000 in direct expenses, plus it will pay \$920 in labor and overhead cost. MP agreed to pay for HECs delivered to low and moderate income customers with electric or non-natural gas space heating. It is anticipated that 20 of the 100 HEC participants will be renters.

Minnegasco is also supporting the HEC project in Little Falls. Minnegasco will pay for check-ups delivered to customers with natural gas space heating.

No participant opposed this project.

The Commission will approve this project because it is targeted to low and moderate income customers and electric space heat customers. This project demonstrates an appropriate joint effort by public and private organizations to deliver needed energy conservation services to customers who would otherwise not conserve energy.

6. Low Income Electric Space Heating Project

This is a new project proposed by MP in response to the Commission's request to develop a new CIP targeted to low income residential customers. MP proposed a budget of \$66,920 to provide up to \$2,000 of cost-effective weatherization improvements to each participating household. MP will coordinate this project with CAP

Weatherization Agencies. The agencies will use existing weatherization evaluations to determine the improvements to be made. Only low and moderate income households are eligible to participate. MP estimated that participants will save approximately 10% of their annual energy use.

The DCAP argued that this project should be open to low income renters in addition to owner occupied units and proposed that the funding level be set at \$250,000 per year. The DPS agreed that the funding level for this project should be increased.

The Commission finds that this is an appropriate project for MP to fund because it follows the Commission's directive to develop a project targeted to low income customers that use greater than average amounts of electricity. However, the Commission also finds that MP's proposed budget would only address the needs of 3% of the targeted group. This is an insufficient effort for the first year of the program. The Commission agrees with the DCAP and the DPS that the funding level for this project must be increased. The Commission will approve this project at a total budget of \$86,000. This is approximately 50% more than the amount proposed by MP and will more appropriately meet the needs of low income customers in MP's service area.

7. Fond du Lac Home Energy Check-Up

The purpose of this project is to provide energy audits, installation of infiltration weatherization kits, and financing of major conservation improvements to participants in the Fond du Lac community. MP proposed to pay \$65 for each check-up and \$25 for each weatherization kit installed. The objectives are to complete 250 check-ups and to install 250 weatherization kits at a cost of \$22,500. MP also proposed to spend \$920 for its overhead costs for a total project budget of \$23,420. MP estimated that about 20% of the participants will be renters and approximately 70% will be low income customers.

The Commission will approve this project because it is targeted to low and moderate income customers who are primarily electric space heat customers. This project also demonstrates an appropriate joint effort by public and private organizations to deliver needed energy conservation services to customers who would otherwise not conserve energy.

8. Duluth Home Energy Evaluation

This project would be operated jointly by MP, the City of Duluth, and the City Water/Gas Utility. Under this project MP will fund energy audits provided to applicants of the Duluth Energy Loan program. The City of Duluth will use its Exxon oil overcharge funds to set up a revolving energy conservation loan pool of \$5 million. Applicants to this loan pool must have an energy audit completed by MP or MP's subcontractor.

The proposed budget for this project is \$25,190. The objective of this project is to provide 420 home energy evaluations. The direct cost of each audit is expected to be \$58.

The Commission will approve this project because the cost of the audits appears reasonable and it promises to be an effective joint project using both public and private resources. Further, this is consistent with MP's obligation to offer energy audits under the RCS program.

9. DCAP Alternative Project - Electric Energy Help Project

The DCAP proposed this project to provide low income customers with an electric energy audit, installation of energy saving measures, and specialized training to help them conserve electric energy. This project would be operated in conjunction with DCAP's DOE weatherization program. The goal of the project would be to serve 200 households which represents approximately 50% of those participating in the DCAP weatherization program. The total projected annual budget is \$22,340 resulting in an average cost per household served of \$111.70. This audit would look only at electric energy use in low income households.

MP did not include this project in its recommended program because it questioned whether the projected 5 to 10% savings are achievable and because the cost-effectiveness of the program is negative.

The DPS was also unable to recommend approval of this project.

The Commission agrees with the DPS and MP and will not approve this project. There are already several audit-type projects offered by MP. Further, the Commission finds that a project that is not funded on a pay-for-performance basis is not likely to be effective.

ADEQUACY OF MP'S PROGRAM

The second issue is whether the projects discussed above constitute an adequate program.

The Minnesota Court of Appeals in Hanna Mining Company v. Minnesota Public Utilities Commission, 375 N.W.2d 550 (1985) ordered the Commission to adopt interpretive rules for determining what constitutes a "significant investment" as used in Minn. Stat. Section 216B.241, subd. 2 (1986). In response to the Court's order, the Commission has begun rulemaking proceedings to adopt interpretive rules for conservation improvement programs, including a rule defining "significant investment." (See MPUC Docket No. G, E-999/R-85-847.) However, the Commission does not interpret the Court's decision to prohibit consideration of applications by utilities for approval of conservation programs under the criteria set forth in the plain language of the statute while the rulemaking process takes place. To read the Court's decision otherwise would delay implementation of conservation programs that the Legislature has directed utilities to undertake. See Minn. Stat. Section 216B.241 (1986). In order to carry out the Legislature's directives concerning conservation programs by utilities, the Commission will proceed under its procedural rules currently in effect. It will apply the facts to the statutory law in evaluating programs proposed by utilities until such time as interpretive rules are adopted.

The Commission finds that MP's proposed program is inadequate in two respects. First, the Company's proposed spending level on conservation projects is less than the approved spending level than the other CIP electric utilities (Otter Tail Power and Northern States Power) on both a total budget basis and as a percentage of residential revenues. The Commission finds that MP's spending level needs to be increased to meet the statutory requirement that MP makes a significant investment in conservation improvements. The Commission does not find the size of the proposed commitment to be acceptable, given the legislative mandate in Minn. Stat. Section 216B.241 (1986) and the conservation potential remaining in MP's service area.

Second, MP's proposed program is aimed entirely at the residential class of customers. While not disagreeing with this primary emphasis, the Commission recognizes that a considerable body of literature suggests that substantial conservation potential exists in the commercial class. (See, for example, the 1984 Energy Policy and Conservation Biennial Report by the Energy Division of the Minnesota Department of Energy and Economic Development.) No information available to the Commission suggests that this general statement is inapplicable to MP's service area or that cost-effective conservation measures will take place at desirable levels in the commercial class without the incentives and emphasis which can be provided by a CIP project. The Commission concludes that MP's efforts should be expanded to other customer groups (e.g., commercial customers).

Last year's CIP Order, MP, E-015/M-86-240, directed MP to develop and propose projects targeted toward commercial customers. MP developed and analyzed three commercial customer conservation programs. MP used the commercial conservation program experience of other Minnesota utilities to obtain insight into successful commercial projects. MP maintained that none of the commercial projects are cost-effective from the ratepayer's perspective and the net effect would be to increase costs to all MP customers. MP further maintained that it has complied with the Commission order to develop commercial conservation programs, but is not proposing to implement any commercial conservation program.

The three projects developed were: Commercial and Industrial Lighting Conservation Project; Heat Pump Water Heater Project; and Commercial Energy Audit Project.

The Commission has examined these projects for suitability for MP to implement to increase its CIP commitment. The Commercial Energy Audit Project, with appropriate modifications, seems to be the most suitable project for MP to carry out because it will allow auditors to note further opportunities for commercial conservation as well as leading to immediate conservation possibilities for the project participants.

MP stated that under a Commercial Energy Audit Project it could provide energy audits to 5% of eligible electric space heating customers each year. MP proposed that electric space heating customers with less than 100 kw of total demand would be eligible to receive a free energy audit. The audit would include on-site inspection of the customer's energy consuming equipment and the building envelope. MP estimated a budget of \$14,590 for the first year of this project, providing audits to 60 customers.

The Commission finds that Minnesota Power's Commercial Energy Audit Project must be modified by charging commercial customers for audits completed and by removing the proposal to limit the audit to space heat customers only. The Commission finds that the audits should be targeted to the general service class. MP will be directed to work with the DPS to develop an appropriate price schedule for the audits and submit a revised Commercial Energy Audit project within 60 days of the Commission's Order. A target budget of \$30,000 to \$40,000 is an appropriate range, subject to modification when project details are known.

Minnesota Power will also be ordered to initiate one or more new projects for next year's CIP filing. These new projects are required to correct the deficiencies of the proposed program.

First, there appears to be an opportunity for improving upon projects dealing with water heaters. This area is particularly suitable for helping low-income customers. Second, Minnesota Power's projects should be expanded to provide additional conservation services to small commercial customers.

The Commission has researched the types of projects which might be suitable for certain customer groups. In addition, MP, the DPS, and other persons may have ideas which the Company could develop into worthwhile CIP projects. The Commission will order Minnesota Power to work with the DPS to develop and submit one or more new projects for inclusion in MP's May 1, 1988 filing.

A general description of the two projects which the Commission suggests for development and implementation is as follows:

Water Heater Conservation project - In its May 1, 1987 CIP filing, page 7, MP stated that total electric water heating saturation is 54.7%. Therefore, it is likely that a significant amount of conservation potential exists for this end use. This project should be designed to give special consideration to low income customers.

Rating Multifamily Housing project - Under this project, MP would provide a free energy efficiency analysis, upon request, to any owner of an electrically-heated apartment building. The building would be provided with a heating energy efficiency label, similar to the Energy Guide labels found on most major appliances, to allow prospective tenants to compare the relative heating efficiency of apartments. The label would state the building's rating and its ranking with other buildings.

Other projects which the Commission has considered and which appear to have some merit include the following:

Construction Conservation project - In this project, MP would develop a standard for certain types of electrically heated buildings based on a design heat loss in BTU/hour/square foot for each type of building. MP would work with builders, developers, building owners, realtors, and home buyers to examine their construction plans and recommend cost-effective improvements to increase the energy efficiency of the new buildings.

Commercial and Industrial Lighting Conservation project - In this project, MP would reconsider the contents of its developed, but not proposed, commercial lighting project. MP should consider rebates for screw-in fluorescent lamps.

The Commission has evaluated the program as proposed by the Company and modified by the Commission in light of the requirements of Minn. Stat. Section 216B.241, subd. 2 (1986). That statute requires utilities subject to its provisions to make significant investments in and expenditures for energy conservation improvements. It also requires the utilities to give special consideration to the needs of renters and low-income people in developing energy conservation programs.

The Commission concludes that MP's program, as modified by the Commission, meets the statutory requirements. The indicated level of investment and expenditure will benefit approximately 1,900 customers, of whom approximately 800 are expected to be low-income persons or renters. The Company's financial commitment will be approximately \$251,990, which represents 0.1% of its total 1986 retail sales revenue and \$2.45 per Minnesota customer. The Commission is aware of the tentative and subjective nature of judging, at this point, the significance of MP's investment and expenditure. Cost-effectiveness and the availability of other community resources for energy conservation can affect the program's significance. Reliable data on these and similar issues will not be available at least until the current projects are well under way. Evaluating the program as a whole, however, the Commission concludes that it constitutes a significant investment in and expenditure for energy conservation improvements.

Since the program also gives special consideration to the needs of renters and low-income persons, as required by statute, the Commission concludes that it meets the statutory requirements.

The Commission concludes that the projects described above constitute an adequate program for MP for 1987-88, assuming that cost estimates, numbers of participants, and other assumptions are reasonably accurate. The projects constitute necessary and reasonable efforts by MP to carry out its CIP responsibility.

In making these findings and conclusions on MP's budget for 1987-88, the Commission is not approving specific budget or project detail for the second and succeeding years of any projects. Multi-year projects will be reviewed for appropriate changes in subsequent years.

OTHER MAJOR PROBLEMS TO ADDRESS THIS YEAR

The third issue is whether there are remaining problems which must be addressed this year.

Interim Status Reports

In order to monitor the progress by MP in implementing the projects approved herein, the Commission will require the Company to file interim status reports on each of the projects. These reports will provide an opportunity to make adjustments in the projects, if necessary. The reports will be due on May 1, 1988 and shall contain, at a minimum, the following information:

1. the number of participants compared to projected participation levels;
2. dollar expenditures compared to the total projected budget;
3. the number of conservation improvements completed;
4. a discussion of unanticipated barriers to participation and strategies to remove such barriers; and
5. a discussion of any unforeseen project problems or project changes.
6. an interim evaluation for each continuing project which will have been in effect for more than one year.

Evaluation Plan

MP submitted its proposed plan for evaluation on April 28, 1987. On May 29, 1987 MP revised its plan in response to comments of the DPS. The revised plan incorporates changes to the Duluth NES evaluation as recommended by the DPS. The DPS also recommended that MP revise the Little Falls HEC project evaluation plan. MP declined to change the Little Falls HEC evaluation because of the limited size and scope of the project.

The Commission will approve MP's evaluation plan, as revised. The Commission agrees with MP that the limited size and scope of the Little Falls HEC project justifies a more limited evaluation.

Shared Savings Project

In its filing of January 23, 1987 MP proposed to terminate the Shared Savings project. Several participants including the DPS agreed with MP that this project should be terminated.

The Commission agrees that this project should be terminated because MP and the other participants were unable to agree on contractual terms needed to carry out the project.

CONSIDERATIONS FOR FUTURE FILINGS

The fourth issue is whether any additional restrictions and conditions should be placed on MP's 1988-89 CIP filing, pursuant to the provisions of Minn. Rules, part 7840.0500, item L.

Cost-Effectiveness Tests

An area which has received considerable attention from CIP respondents is the type of methodology to use to determine cost-effectiveness. The Commission also has a keen interest in this area because of its responsibility to determine which costs and benefits are relevant in evaluating cost-effectiveness. The Commission encourages the DPS and MP to continue their discussions on this matter. Further, to ensure the availability of the information needed to evaluate cost-effectiveness, the Commission will order MP to describe clearly in its evaluations the methodologies and assumptions used by the Company for cost-benefit analysis.

ORDER

1. The Minnesota Public Utilities Commission hereby approves the 1987-88 Conservation Improvement Program for Minnesota Power, as described and modified herein. A total budget of \$251,990 is approved. The program shall include the following projects:

a.	Duluth NES Project		\$63,120
b.	Weatherization Technical Assistance Project	1,920	
c.	Technology Transfer Project		1,730
d.	Little Falls Home Energy Checkup Project	9,690	
e.	Low Income Electric Space Heat Project	86,920	
f.	Duluth Home Energy Evaluation Project	25,190	
g.	Fond du Lac Home Energy Checkup Project	23,420	
h.	Commercial Energy Audit		<u>30,000-40,000</u>

TOTAL BUDGET

\$251,990

2. Minnesota Power shall work with the DPS to develop and implement a commercial energy audit project as described herein and submit it for approval within 60 days.
3. Minnesota Power shall work with the DPS to develop and present in its May 1, 1988 CIP filing, a water heater conservation project, a rating project for multi-family housing, and any other CIP project which may be appropriate including a construction conservation project or a modified commercial lighting conservation project as described herein.
4. On May 1, 1988, Minnesota Power shall submit an interim status report for each project. The report shall contain, at a minimum, the following information:
- a. the number of participants compared to projected participation levels;
 - b. dollar expenditures compared to the total projected budget;
 - c. the number of conservation improvements completed;
 - d. a discussion of unanticipated barriers to participation and strategies to remove such barriers;
 - e. a discussion of any unforeseen project problems or project changes; and
 - f. an interim evaluation for each continuing project which will have been in effect for more than one year.
5. Minnesota Power shall include in its May 1, 1988 CIP filing a list of topics of any evaluation reports it has completed, the submission dates of such reports to the Commission, and a list of expected completion dates for evaluation reports on completed, on-going and newly proposed projects.
6. Minnesota Power's proposed evaluation plan filed April 28, 1987 and modified May 29, 1987 is approved.
7. Minnesota Power's termination of the Shared Savings Project is approved.
8. Minnesota Power shall include in its evaluation reports a description of methodology and assumptions used for any cost-benefit analysis.
9. Minnesota Power shall file 13 copies of all documents required by this Order with the Commission. Minnesota Power shall also provide one copy each to the DPS and any other person requesting one. The DPS and other interested persons will have 15 days to file comments on the Company's filings with the Commission.
10. To the extent practicable, customers participating in Minnesota Power's CIP projects shall have a free choice of the device, method or material, and seller, installer, or contractor for the CIP improvement.
11. This Order shall become effective immediately.

BY ORDER OF THE COMMISSION

Mary Ellen Hennen
Executive Secretary

(S E A L)